



Critical Foundations for Algebra

The National Mathematics Advisory Panel report offers recommendations for how we can best prepare elementary and middle school students for success in algebra, a gateway to mathematics in high school and beyond.

Mathematics Preparation for Algebra

- Follow a focused, coherent progression of mathematics
- Achieve proficiency with whole numbers, fractions, and aspects of geometry and measurement
- Build deep understanding
- Emphasize fractions and related concepts



Comprehensive Instruction

- Develop conceptual understanding, computational fluency, and problem-solving skills
- Achieve automaticity in computation
- Provide adequate practice
- Encourage effort and persistence



Mastery Framework

- Set benchmarks for key skills
- Use formative assessments
- Provide explicit instruction for struggling students
- Offer acceleration and enrichment for gifted students



Grade-Level Benchmarks for Critical Foundations*

PRE-K	
K	
1ST	
2ND	
3RD	● Add and subtract whole numbers
4TH	● Identify, represent, and compare fractions and decimals
5TH	● Multiply and divide whole numbers
	● Compare, add, and subtract fractions and decimals
	● Solve problems with perimeter and area
6TH	● Multiply and divide fractions and decimals
	● Use all operations on integers
	● Analyze properties and measures with 2- and 3-D shapes
7TH	● Use all operations on positive and negative fractions
	● Solve problems with percent, ratio, rate, and proportion
	● Relate similar triangles with slope of a line
8TH	